

Theories of Moral Sentiment

*-Mapping people's preferences for fairness and equity in distributional
policies*

Marcus Langberg Smestad

August 22nd, 2005

Department of Economics

University of Oslo

Preface

The reasons for writing a thesis covering the subject of moral and economics are many. My own reason is purely a keen interest in the subject; but for the field of economics it is important to figure out the way in which people think about questions essential for the smooth running of the economic system we depend upon.

While originally planning to write an overview of the literature on social choice, it was my supervisor's suggestion to turn this in another direction, such as to make the whole process more interesting and applicable to real life. Thus, I found myself in the middle of a project on distributive principles. Alexander Cappelen's enthusiasm for the project has been of utmost importance in the writing process, as without his well-placed comments this thesis would have suffered for initially starting out as with a different focus. The project has taken many sharp turns, and the survey has changed format many times, but the result is both simple and informative. I thank him for agreeing to serve as my supervisor and Kalle Moene for being my co-supervisor.

I would like to thank Kjetil Grandal at the Faculty of Theology, for making his class available to me so that I was able to carry out the vignette survey, and my wife for putting me in contact with him. I must also thank Kalle Moene and Halvor Mæhlum, both at the Department of Economics, for letting me interrupt their lecture. The two have also contributed with invigorating and amusing comments and a puzzling lunch "meeting".

James Hart also deserves great thanks for proof reading the thesis. Any remaining faults, however, are solely my responsibility.

Table of Contents

<i>Preface</i>	<i>i</i>
<i>1. Introduction</i>	<i>1</i>
<i>2. Justice, Equity and Responsibility</i>	<i>4</i>
2.1 Egalitarianism and Lack of Responsibility	5
2.2 Libertarianism and Full Responsibility	6
2.3 Liberal Egalitarianism and the Responsibility Cut	9
<i>3. Behavioural Economics and Experimental Game Theory</i>	<i>14</i>
3.1 Empirical findings	15
3.2 The Cappelen et al. Experiment	20
<i>4. Experimental procedure</i>	<i>24</i>
4.1 Selection of Subjects	25
4.2 Course of Action	26
4.3 The Vignettes and their Rationale.....	26
4.4 Results	30
<i>5. Discussion and comparison</i>	<i>36</i>
<i>References</i>	<i>40</i>
<i>Appendices</i>	<i>43</i>

1. Introduction

A central question in economics and distributive justice is: “for what should people be held responsible?” Different theories give very different answers to this seemingly simple question. This paper will venture into the maze of theories covering justice and equity, not in an attempt to give a final answer but with a hope of bringing clarity to this question. As the title indicates, my aim is not to pin down the one normative theory that is “correct”, but to reveal peoples general opinion on distributive justice in a positivistic manner. I will therefore refrain from stating what objectively are fair and unfair principles of distribution. What I will do is to try to find the principle people in general regard as fair in distributional policies.

Different normative ideals give different answers to what a just distribution is, spanning from the theories that place no responsibility on the agent, to the theories that place full responsibility on the agent; from Strict Egalitarianism in one end of the scale, to Libertarianism in the other end. A consequence of egalitarianism is that no responsibility is placed on the agent. Here the distribution is independent of both talent and effort but strives for an equal distribution of goods or welfare over the entire population, holding no one responsible for neither their effort nor their talent¹. Contrary to that we have Libertarianism as a representative for full responsibility. Here the distribution depends on the value of the agent’s contribution, as a product of talent and effort. People are thus held responsible for both their talent and their effort. In the middle of this scale – or at least somewhere between the two – we have Liberal Egalitarianism. Here the distribution depends solely on effort, and combining egalitarianism with personal freedom, holding people responsible for their choices, the liberal egalitarian ideal seeks to equate differences in welfare originating from differences in talent, but at the same time letting inequalities caused by differences in chosen effort subsist. When discussing liberal egalitarianism, a debate on where to draw the responsibility cut, the cut between factors that are controllable or not controllable by the individual person, is included, as this question is of utmost importance when applying this principle.

¹ Here, as well as in the rest of the paper, talent is used as a collective term for all the factors that are outside the control of the agent, while effort is a collective term for all the factors that are under the agent’s direct control.

Behavioural economics has tried to answer the question of personal responsibility and fair distributions using game theory. In a positivistic tradition, behavioural economists have traditionally been concerned with whether people really *do* care about what is right or fair. Results from previous dictator and ultimatum games go some way in finding the answer, but common to almost all these experiments is their inability to show how people weigh effort and talent against each other. People do not only care about their own well being, but include some form of ethical consideration as an integral part of the decision-making process. Robust conclusions both from Ultimatum games as well as Dictator games show that people offer more than any profit maximising agent would. This tells us that people are at least partially motivated by moral norms when sharing a given sum of money, but little about what people perceive as fair or just. A recent game experiment conducted by Cappelen et al. (forthcoming)² has tried to address this issue. In this experiment, they seek to study how people's perception of a just distribution relies upon each player's talent and effort put into producing a contribution to a pool of goods. The aim of their experiment is to estimate the prevalence of four different distributive principles as well as the weight the players attach to fairness considerations. However, this experiment has two problematic issues. Firstly, the players are chosen from a homogenous group, and secondly, the cut between talent and effort is too clear compared to what is experienced in the real world.

I wish to contribute to the research done by Cappelen et al. with a different approach. Using a vignette questionnaire, my aim is to study where people's general perception of justice is placed on the scale from full responsibility to no responsibility, and to check if the results from Cappelen et al. are changed when the cut between effort and talent is blurred. Blurring the cut is done through the introduction of another variable (in addition to the two variable used in Cappelen et al.) in the vignettes. The survey will be conducted on two separate groups to ensure a heterogeneous selection of subjects. I find it interesting to study whether there are any significant differences between different groups of students, as indicated by Fehr & Schmidt (2004). The results will be compared to the results from Cappelen et al. The use of the vignette format is by no means a miracle solution, but it addresses neatly the issues pointed out above, while other information revealed by the Cappelen et al. design is sadly lost.

In chapter 2 I present the normative theories of distributive justice along an axis of responsibility, from egalitarianism to libertarianism. Chapter 3 covers the relevant work

² All future references to Cappelen et al. is to this paper, unless otherwise noted.

done in experimental economics on the issue at hand, as well as a more thorough presentation of the Cappelen et al. experiment. In chapter 4 the vignette survey is presented, with selection of subjects, method and results. Lastly, in chapter 5, a discussion of the results from the vignette survey as well as a comparison of the results from the vignette survey with the results from Cappelen et al.

2. Justice, Equity and Responsibility

“...any normative theory with a claim to relevance must direct actions that are sustainable in the real world with real values.”

(Konow, 2003, p.1191)

During the late resurgence of interest in political philosophy there has been launched some genuinely new ideas but common to almost all is the view that the theories are located on the traditional left-right axis, with egalitarianism representing the left and libertarianism the right. Kymlicka (1990, pp. 1-5) puts this down to the fact that while the left believe in equality, the right believe in freedom. However, are these contrasting values? Kymlicka (1990) claims that there is no way to argue for equality over freedom, or freedom over equality. He goes on to state: “A successful theory of justice, therefore, will have to accept bits and pieces from most of the existing theories”. In this way, he is a proponent of the liberal egalitarian theory with its responsibility cut representing the mix of egalitarian and libertarian values. Dworkin (1977, pp. 179-183; 1983, p. 24; 1986, pp. 296-301; 1987, pp. 7-8, cited in Kymlicka, 1990, p. 4) views it differently. In his view, all plausible political theories are egalitarian theories. The difference lies only in how they define equality. Egalitarianism tends to emphasise equality of income, while libertarianism usually emphasises equal rights to one's own labour and property. Dworkin's point is that the idea that each person matters equally lies at the heart of all plausible political theory.

Obviously there are almost as many opinions of what is morally right as there are people on the earth, but throughout history people have tried to formalise in an as easily understandable framework as possible what should constitute “right” and “wrong”. The field of economics has participated in this too, at least in its youth. From the mid 19th century to early in the 20th century Economics used to be part of the moral sciences in the English universities, and economists such as Adam Smith, Robert Malthus and John Maynard Keynes each had their own notions of what was the right approach to increasing the welfare of the people. As the field of economics matured, it evolved into a pseudo science trying to mimic the accuracy of mathematics and physics. While this certainly disabled (at least in the short run) economists from addressing issues of a more esoteric nature, it enabled them to

formalise their work in a way such that the profession became cumulative in a sense it had not been before.

In relevance to economic theory, perhaps one of the most interesting questions is to what extent the different theories of justice hold people responsible; and for what. In an attempt to answer this question I find it clarifying to divide the theories into three groups, spanning from one extreme to another. One extreme contains the theories which do not hold people responsible at all. Egalitarianism will represent this group. In the other extreme, there are the theories that hold people responsible for everything, which is represented by libertarianism. In the third and last group, we find the many theories that combine the two previous theories and only hold people responsible for some of their attributes. The collective term for this group is liberal egalitarian theory. Different liberal egalitarian theories hold people responsible for different attributes, but they all have one thing in common; they hold people responsible for something and this something they all claim to be factors within control of the individual. Where they differ is in the interpretation of what is actually controllable. In the following sub chapters, I will present the philosophies representing the different groups of theories.

2.1 Egalitarianism and Lack of Responsibility

To begin with: what does egalitarianism say about personal responsibility? Egalitarian ethics will dictate a preference towards social states where all people have equally much, or where all people have the same level of welfare. In this state, there is no room for allowing differences to persist, thus people are not held responsible for any of their choices³.

Although egalitarianism may sound like a good social state, strictly adhering to egalitarianism may not be so desirable after all. Take for example the incentive problem. If there are enough people who do not wish to contribute to society, the overall level of goods may go down compared to other possible systems, and as Crocker (1977) pointed out, a situation in which everyone is equally miserable is obviously less desirable than an unequal situation where even the worst off are doing very well. Thus, strict egalitarianism, while securing an equal welfare distribution, may be unfair for the population at large. Wolff

³ This applies of course only to the question at hand, personal responsibility and redistribution. It does not necessarily apply to situations of breaking laws etc.

(1998) discusses the possibility of the unfair distribution of the strict egalitarian philosophy. An example from his article is Will Kymlicka's retelling of Dworkin's objection to Rawls.⁴ Imagine two equally talented people. Person 1 is a hard working gardener, producing resources, while person 2 only plays tennis, producing nothing. Person 1 will prosper because of his hard work put into resource production, but person 2 will remain poor because he is not producing anything, only playing tennis. Strict egalitarianism will dictate that resources are transferred from the gardener to the tennis player in such a way that after the redistribution the two have an equal bundle of resources. It should be clear to all reasonable people that this does not constitute a just system. Kai Nielsen (1985, cited in Konow, 2003), another supporter of strict egalitarianism, advocates the abolishment of all material inequalities, but remembering that they both, the gardener and the tennis player, are equally talented, this redistribution does not seem to be fair. In this respect, the general critique of egalitarianism from the libertarians is well placed. It is indeed a problem of egalitarianism that, just like utilitarianism, it fails to hold people responsible for both effort and ability. Regardless of how much people work, or how much they produce, they should all be "given" the same level of welfare.

Not much work has been done on elaborating the idea of pure egalitarianism, but this is not to say that egalitarianism is not important. Because of its apparent flaws, it is seldom advocated in its pure form but usually acts as a starting point for other egalitarian-inspired theories seeking to correct the flaws but keeping with the original idea.

2.2 Libertarianism and Full Responsibility

Libertarian values typically strongly emphasise personal freedom. People are free to act as they wish, as long as it does not impede other people from acting out their own freedom. A libertarian would not generally embrace redistribution, or taxation in order to carry out redistributive policies and is thus in firm opposition to the strict egalitarian, and even the liberal egalitarian.

Personal responsibility goes hand in hand with personal freedom, and the Libertarian will acknowledge this when assessing principles of distribution. The individual is rewarded

⁴ Kymlicka (1990), pp. 73-76

solely according to the value of his production (i.e. the product of talent, effort and the pay per page in the survey). Traditionally, libertarians are strong supporters of free markets and opponents of state-run social policy. This is not to say that all supporters of free markets are libertarians. The reason is that they may not share the libertarian view that the market is inherently just.

Robert Nozick is perhaps the best-known advocate of the libertarian stance. His book *Anarchy, State, and Utopia* from 1974 is essential reading for anyone venturing into libertarian theory. At the heart of Nozick's theory lies the profound belief in the individual's rights. His conception of equality is that people are self-owners, i.e. that they own their talents, and this is referred to as the "Self-Ownership Argument". Nozick's intuitive argument for libertarianism is put forward through what is referred to as "the Wilt Chamberlain Example"⁵. Roughly, this example goes as follows. Imagine an initial distribution, D1, of any chosen form, e.g. according to Rawls's difference principle. The basketball player Wilt Chamberlain is a great gate attraction. He signs for a club, and his contract states that he is to receive twenty-five cents from the price of each admission ticket of every home game. During a season, 1,000,000 people come to see him play, and Chamberlain ends up earning \$250,000 (a larger sum than the average income and larger than anyone else has). Nozick then asks if this new distribution, D2, is unjust and if so, why? His argument for why D2 is just is based on the fact that all the spectators willingly paid the money to see the game, thus chose to give Chamberlain the twenty-five cents. The people that attended the games could have chosen to spend the money on something else, but the fact that they willingly gave Chamberlain twenty-five cents, in addition to the assumption that the initial distribution, D1, was fair makes the new distribution, D2, fair. How can D2 be unfair if D1 was fair, and people willingly moved to D2?

Kymlicka's (1990) argument against Nozick's libertarianism is that it ignores our intuition about dealing fairly with unequal cases. When Nozick instructs us to specify the initial distribution, he assumes that we thereby distribute full property-rights, thereby complying with Nozick's own principles. This is the reason why D2 *appears* to be just. Kymlicka (1990) summarises Nozick's arguments (and thereby libertarianism) in two claims:

⁵ The entire text can be found in Nozick (1974, 160-162).

-
- “1. Rawlsian redistribution (or other coercive government interventions in market exchanges) is incompatible with recognizing people as self-owners. Only unrestricted capitalism recognizes self-ownership.
 2. Recognizing people as self-owners is crucial to treating people as equals.”

This leads to two points that need to be discussed in detail, viz. self-ownership and property-ownership. Nozick argues that people own their own talents and the products of their talents. Talents typically need to be applied to external resources to yield any products, and in order to apply your talents to any object you need to have the property-rights to that object. The question that then arises is the validity of property-rights to external resources. Nozick agreed that for the result of a market transaction to be rightful, the property-rights before the transaction took place had to be rightful. Tracing the original property-rights leads to an almost infinite string of iterations, stopping only when man first walked the earth. We then face a problem of determining the nature of initial acquisition, which is essential to the validity of Nozick's theory. Historically, property-rights have been gained by the use of force. Most property-rights today are therefore not valid, and, contrary to what Nozick claims, there is no moral reason why governments should not confiscate resources and redistribute them (Kymlicka, 1990: p. 108). The only way in which the results from market transactions can be legitimate would be after a one-time general redistribution of resources. After this redistribution people must sell their talents or the products of their talents, and all transactions will be just, as long as the market can act freely. Those people who do not manage to sell their labour will eventually, and justly, die. Any sound person will say that this cannot be just. Kymlicka (1990: 118-25) continues his discussion on libertarianism with an attempt at proving that self-ownership is indeed compatible with equality, and that there is no conflict between a Rawlsian distributive scheme and not denying self-ownership. In his own words: “People have rights to the possession and exercise of their own talents, but the disadvantaged may also have rights to some compensation for their disadvantage.”

What is shown here is the justification of the no-redistribution policy of the libertarians. If they can produce a valid argument for self-ownership of talent, libertarians think to have justified the view that people are fully responsible for both their talent as well as their effort. Because people are fully responsible for both, redistribution from the wealthy to the poor is not compatible with a just system in the libertarian manner.

As libertarianism argues for full responsibility for a person's every factor, it cannot embrace redistribution and must postulate that every person is fully responsible for any choice made regarding effort and in addition for his talent.

2.3 Liberal Egalitarianism and the Responsibility Cut

Recognising the apparent flaws of egalitarian and libertarian philosophy, liberal egalitarian theory combines the two, in an attempt to correct their failings. The result is a theory that both holds people responsible for the factors they intuitively can control and equalises differences stemming from factors outside the person's control.

Rawls was perhaps the first proponent of a theory that in economics opposed the near-consensus of utilitarianism with the publication of his seminal book *A Theory of Justice* in 1971. The theory of Rawls is the foundation of social contract theory and the backbone of liberal egalitarian theory. Rawls' idea, quite over-simplified, is that when deciding the order of society, the social contract, people should be placed in the "original position" or behind a "veil of ignorance", not knowing their social state, occupation, nationality etc. This theoretically induces people to design a thoroughly just society where goods produced by the talented may be used to support the disadvantaged. If, for example, some people knew they were wealthy, they could possibly define taxation of the rich to support the poor as unjust. Behind the veil of ignorance, not knowing whether they are rich or poor, this would be a bad strategy for any rational person. What Rawls believed would be the result of placing people behind the veil of ignorance was that they reached a contractual agreement complying to the "difference principle" in which inequalities are allowed for, but only to the extent that they are beneficial to the least well off. Rawls has later been criticised by fellow liberal egalitarians who have tried to develop further his basic idea. Konow's (2003) "need principle" can be seen as a development of Rawls' "difference principle". While there, according to Konow (2003), is little empirical evidence supporting the difference principle, or indeed egalitarianism, a principle with just allocations providing for basic needs equally across individuals is a more defensible rule. This means that when needs differ across individuals, satisfying the basic needs at an equal level justifies unequal material allocations.

Another important aspect in the move from strict egalitarianism to liberal egalitarianism was the solution of one the most striking intuitive difficulties arising with

strict egalitarianism, viz. the incentive problem originating from its failure to hold people responsible for *any* of their actions. Liberal egalitarianism proposes to hold people responsible for the factors they can control, effort, while not holding them responsible for factors out of their control, talent. If you have two equally talented people, freely choosing their work effort, resulting in an unequal distribution of welfare, then according to liberal egalitarian theory there should be no redistribution of goods in order to equalise their welfare. Drawing upon both libertarian and egalitarian values, liberal egalitarian theory seeks to eliminate welfare differences originating from differences in talent, but at the same time allowing for differences originating from differing personal preferences (thus incorporating libertarian values). It is worth noting that Rawls' difference principle does not make such a distinction. According to the difference principle even inequalities originating from a choice not to work justifies redistribution. This seems intuitively wrong, and because of this Konow (2001, 2003), amongst others, have developed Rawls' idea of into principles that seem more intuitively defensible. Konow's (2000) proposition to the solution of the problem demands a division between discretionary variables and exogenous variables:

“A discretionary variable is one that affects production and that the individual can influence...”

“An exogenous variable is one that the person cannot reasonably influence but that may have an impact on output.”

This division though, brings with it certain difficulties regarding the classification of which differences that originate from talent, and which that originate from preferences or choices. The reason for dividing the origin of potential welfare differences in this manner is to hold people responsible for their choices, e.g. regarding effort, but not for unchosen differences in natural resources or talent. Looking again at the example of the gardener and the tennis player, we see that it is clear that if adhering to LE theory there should be no redistribution of resources between the gardener and the tennis player as they both have the same skills. This situation, with equality of talent, but at the same time vast differences in the distribution of goods, is supposed to be a fair situation. Other writers have also thought in the same lines. Roemer (1993) sums up the views of prominent egalitarian advocates by stating the following:

“The general form of the egalitarian ethic that emerges from [Dworkin, Arneson and Cohen] is that *society should indemnify people against poor outcomes that are the consequences of causes that are beyond their control, but*

*not against outcomes that are the consequences of causes that are within their control”*⁶

Here Roemer says exactly the same thing as what Konow (2000) expresses with his *Accountability Principle*:

“Accountability Principle: The entitlement varies in direct proportion to the value of the subject’s discretionary variables, ignoring other variables, but does not hold the subject accountable for differences in the values in the exogenous variables.”

These views are both in accordance with the liberal egalitarian tradition started by Rawls, but both authors have developed and refined the original ideas in an attempt to make the theory more intuitively correct, as well as more in accordance with the “real world”.

Cappelen & Tungodden (2004) breaks liberal egalitarianism down to two parts; the egalitarian principle of equalising differences originating from factors outside the control of the agent, the *principle of equalisation*, and the liberal principle that agents are held responsible for the total effort they choose to apply, the *principle of responsibility*. The basic principle behind this division is the same as in Roemer (1993) and Konow (2000). This leads to one of the most important aspects of liberal egalitarianism; where is the cut between talent and effort? When placing the responsibility cut it is important to have a good understanding of the definition of the exogenous factors. To further define the term exogenous factors, they can be either of the two: all the factors outside of you, or; all the factors outside of your direct control. The most common interpretation is the latter. In the citation from Konow (2000) above, he uses the phrase “reasonably influence”. This is not compatible with the interpretation that exogenous factors are all the factors outside the agent. What he means by this is that exogenous factors are the things you cannot be held responsible for, i.e. the results of choices not made by you. If you draw this argument long enough, any factor can be defined as exogenous. Even how many hours you choose to work, it can be argued, may be the result of some external factor outside your control, such as the work ethic of your parents or the tradition in the country you reside in. If we go back to the 19th century, your profession was largely determined by your parent’s (i.e. your father’s) profession, or by your social background. Even though increased social mobility has loosened this up somewhat, both these factors remain important in deciding many people’s profession and it is therefore still questionable whether your choice of profession is directly under your own control. In

⁶ Brackets added by me, italics as in the original.

addition, we have to remember that there are vast differences between the degrees of social mobility in various parts of the world. If we move the focus from modern day Europe to the situation in e.g. India, we will observe that the conditions may be no different than they were two hundred years ago in Europe with regards to social mobility. The same type of argument also applies to many other factors, which at first glance appear to be discretionary. Regardless of which factors are classified as exogenous or not, it is important to analyse how different exogenous factors are correlated with each other. Cappelen & Tungodden (2004) show that by equalising a non-responsibility factor⁷, one may increase the overall level of inequality in non-responsibility factors. This will increase the ideal level of redistribution. The reason for this is the possibility that there may be negative correlation between different non-responsibility factors. This knowledge may be useful in the understanding of the effects of the location, and possible relocation of the responsibility cut. Reasons for a possible relocation of the cut are many. One may be the advance in genetic research, to take an example from Cappelen & Tungodden (2004). A factor previously thought to be discretionary may turn out to be exogenous, thus justifying – perhaps necessitating – a relocation of the responsibility cut. Other reasons are technological advances and social and epistemological developments.

Although we recognise the problem of locating the responsibility cut, the most important issue in this paper is what the respondents intuitively perceive as controllable and non-controllable factors. Within the liberal egalitarian category there are many possible variations, all depending on the factors people perceive as controllable or non-controllable. Within the parameters of the vignette survey we have the “classic” liberal egalitarian, where work effort is controllable, while wages and pages produced are not. Another interesting variation is called meritocratic. In the meritocratic position people are held responsible for their productivity, i.e. the product of effort and production, but not for the value of the production. This position is closer to libertarianism than the “classic” position only that here both work effort and the amount of pages produces is regarded as controllable, as opposed to only work effort in the “classic” position. The standard position taken by most economists, utilitarianism or welfarism, may also sort under the liberal egalitarian heading. Utilitarianism, though, has many problematic sides. Rawls expressed in his article “Classical Utilitarianism” his analysis on this view of justice that Kymlicka (1992, p. xiv) neatly summarises in three arguments:

⁷The authors use the term “non-responsibility factors” for what I have called “exogenous factors” or “talent”.

“According to Rawls, utilitarianism (a) may require the endless sacrifice of some people for the greater good of others, and so is intuitively unfair; (b) is a teleological theory, and so ignores the separateness of persons; and (c) counts every source of utility, no matter what its source, and so ignores the difference between morally legitimate and illegitimate interests.”

All of these arguments have been the subject of much debate. Regarding Rawls' first argument, Hare and Griffin (ch. 4 and ch. 5 respectively in Kymlicka, 1992) refute the argument that utilitarianism is counter-intuitive by pointing out that the principle of utility works at different levels, and that Rawls mixes different levels of moral thought and action. Regarding the second argument, Kymlicka (1992, ch. 6) concludes that this argument is misplaced, as he finds that “utilitarians seek to maximize utility because this is their way of respecting people's moral equality.” Utilitarians have argued that Rawls's third argument is unwarranted, as perverse sources of utility, such as the ones in the example above, would be outweighed in calculations of overall utility. Even though that might be the case, Rawls still has a valid argument because these sources of utility should not have any moral weight at all.

What is the essential part of liberal egalitarian theory is the combination of responsibility and redistribution. It is this position that has the support of most scientists working with the problem of responsibility and redistribution today. I also expect this to be the most prevalent principle amongst the general public. Liberal egalitarianism solves the incentive problem of egalitarianism and the problems of libertarianism connected to people of lesser abilities. That said, it is not without its problems, the toughest being making the cut between effort and ability.

3. Behavioural Economics and Experimental Game Theory

“Despite the emerging consensus in economics over the relevance of fairness, though, no such agreement yet exists among economists or, for that matter, among psychologists, political scientists, sociologists, or philosophers, about the proper theory of justice.”
(Konow, 2003)

How has experimental game theory answered the question of the prevalence of distributive principles? In order to be able to work with questions of responsibility and redistribution it is of great importance to have a “clear” view of the human psyche. Behavioural economics seeks to implement psychological findings in traditional economic theory, in order to increase its explanatory power. An important aspect of behavioural economics lies in the profound belief that implementing realistic psychological foundations into economics theory will improve the value of economic research. In this paper, the subject of fairness is one of great importance. In the previous chapter, normative moral theories were presented. These moral theories, each in their own way, are all attempts at providing more realistic assumptions for economic (and other social) theory. Adding more realism to economic theory, however, often makes it less tractable. There is thus a balance act between realism and tractability. The history of behavioural economics is a diverse one. In the early days of the discipline of economics, it was very much integrated with other social sciences. The economist would act as a quasi-psychologist due to the fact that psychology had yet to be acknowledged as a discipline in its own right. Camerer et al. (2003) give a brief overview of the history of behavioural economics starting with Adam Smith’s *The Theory of Moral Sentiments* and continuing up until the neoclassical revolution with their ideal of economics as a natural science. They could have continued however, as even relatively recent economists like John Maynard Keynes dabbled with incorporating psychological insight into his economic theory. The economist as a quasi-psychologist died out, but was resurrected beginning in the mid seventies with psychologists using economic models as benchmarks against which they compared their own models.

After the resurrection of the importance of psychological insight in economic theory, the field of behavioural economics has experienced rapid development, especially with the use of game theoretic experiments. But as Camerer et al. (2003) point out, there is a sharp divide between behavioural economists and experimental economists in that the former “...define themselves, not on the basis of the research methods that they employ, but rather their application of psychological insights to economics”, while the latter “...define themselves on the basis of their endorsement and use of experimentation as a research tool”. In this paper, the view of the experimental economist will be the one applied.

3.1 Empirical findings

Attempting to bring research in economics one step further necessitates knowing what has and what has not been done before. It is of no use finding well-known answers to old questions. Finding the essential questions that need to be answered is half the job for the researcher, and that entails sifting through previous work and discovering their flaws.

When trying to map people’s preferences regarding distributional policies and departures from self-interest, two types of games have been frequently used. These are the *Ultimatum* game and the *Dictator* game. The ultimatum game works as follows. Two players are presented with a pot of money to divide amongst them. One of the players is appointed as proposer while the other then is the decider. The proposer then offers a certain fraction of the sum to the decider. The decider then has to accept or decline the offer. If he accepts he receives the proposed fraction of the sum total, but should he reject the offer neither player will receive anything.

What is seen in this type of game is that the players seldom act in the supposedly rational way. A rational decider will accept any positive offer from the proposer, while the rational proposer only will offer the lowest possible fraction of the pot. What we see is that deciders often reject “insultingly” low offers. Studies indicate that offers typically range from one third to one half, and that offers lower than one fifth are rejected half the time⁸. The effects that supposedly bring these results about are manifold. One effect that is under the focus of attention at present is reciprocity, i.e. that the decider wishes to reciprocate the

⁸ See Camerer et al. (2003) under the chapter *Fairness and Social Preferences*.

insult by rejecting the offer so that neither of them will get anything (the proposer typically losing the most). Reciprocity deserves a treatment of its own as it has proved to be an important aspect of modern theory on behavioural economics. Reciprocity means that in response to friendly actions people tend to act in a manner deviating from the usual hypothesis often applied in economics, that people are purely self-interested, repaying the act by sacrificing personal gains. We find examples of both positive reciprocity (repaying kind actions with kind responses) and negative reciprocity (repaying unjust actions with malicious responses) both in the “real” world and in the results from game theoretic experiments. Because reciprocity easily can be mistaken for other effects, Fehr & Gächter (2000) point at the importance of making a clear distinction between “cooperative” or “retaliatory” behaviour in repeated interactions and positive or negative reciprocity. While the former is an action taken because of the expectation of future material gains or losses, the latter act is carried out even when no future material gain or loss is expected. It is also important to separate between reciprocity and altruism, altruism being a completely selfless act, an unconditional act of kindness. Negative reciprocity is most easily exposed in the dictator game. As the results from this game indicate (presented below) there is a significant frequency of rejections of low offers, even though this is not a rational strategy. This can be seen as a vindictive response to an insultingly low offer. Even though rejecting any offer larger than zero represents a loss for the responder (and does not give any future material reward), we see that offers of up to 30 per cent of the given sum is generally rejected. The typical explanation for this kind of behaviour is that the responders view the offer as unfair and want to punish the proposer, even though that means that neither of them receives any money (Fehr & Gächter, 2000). The most frequently applied game-types used for revealing positive reciprocity are trust games (with numerous variations) and gift giving games. The standard trust game performs as follows. A Proposer receives an amount of money x from the experimenter, and can then send between zero and x to the Responder, the amount termed y . The experimenter triples the money sent to the Responder, so that the amount he receives is $3y$. The Responder can then return any amount between zero and $3y$ to the Proposer. Positive reciprocity is revealed through the amount the responder sends back to the proposer.

In Henrich et al. (2001) the ultimatum game was carried out in 15 small-scale societies. Their starting point was that economic theory tends to assume that people are entirely self-interested, what they call the canonical model. The results were clear in that the canonical model was not supported in any of the 15 societies studied. In addition, they also

found that, contrary to experiments with university subjects where behaviour is generally consistent with income-maximisation; in the majority of groups studied, the behaviour was not consistent with income-maximisation. What they found was that in most groups average offers substantially exceeded income-maximisation. They explain these results by pointing at cultural differences, e.g. gift-giving cultures, reluctance of sharing or cooperation. Their conclusion is that these results put a big question mark at the widespread use of the rational-actor framework typically applied by economists.

Results by Blount (1995) suggest that although it seems likely that distributional concerns are amongst the sources of rejection, what is mainly driving it is indeed negative reciprocity. As Engelmann & Strobel (2002) highlight, the acceptance thresholds in Blount (1995) are substantially lower if the offer is made by a random mover or by an independent third party, but it is interesting to note that offers made by an independent third party elicited much of the same negative reciprocity as in the case where offers were made by the interested other player. Blount (1995) proceeds to study this phenomenon and finds that the lack of difference between the two conditions does not represent the same behaviour. The subjects express their preference for fairness in different ways according to who made the proposal, the independent third party or the interested second player. According to Blount (1995) this “highlights a deficiency of the predominant social utility framework, which...is unnecessarily focused upon comparative payoffs.”

Other effects explaining the typical behaviour in the ultimatum game are efficiency concerns and maximin preferences, but as the results from Engelmann & Strobel (2002) indicate, the main driving force behind this behaviour is whether there is a perception of an acceptable reason for the apparently unfair allocation proposal. Acceptable reasons include randomness, ignorance or lack of alternatives, while conscious unequal offers are not. There is doubt, however, as to the relative importance of maximin preferences. Fehr & Schmidt (2004) are unconvinced that Rawlsian motives⁹ are of such an importance in strategic interactions at the empirical level as claimed. They use the three-person experiment by Güth & van Damme (1998) to show that the observations contradict maximin preferences. This game is a combination of the dictator game and the ultimatum game. There are three players, and as in the ultimatum game, player 1 has to decide on an allocation of a given sum of money between the three players. Player 2 then chooses to accept or not. Should he reject the offer neither player will receive anything. If he accepts, the proposed allocation is handed

⁹ Fehr & Schmidt (2004) use this expression for what is called maximin preferences in Engelmann & Strobel (2002).

out to the three players. Player 3 has no control in this game and is simply a dummy. What Güth & van Damme (1998) found was that player 1 allocated only marginal amounts to player 3, and that player 2 did not seem to care about the allocation of player 3. This certainly does not support the hypothesis that Rawlsian motives play an important role in strategic interactions at the empirical level.

The experiment by Fehr & Schmidt (2004) also tells another thing that is showing to be an important aspect of experimental economics, namely strong subject pool effects. Traditionally, subjects in experimental games have been students of economics. What Fehr & Schmidt (2004) found was that non-economists seem to be much less concerned with efficiency and care more about equality than do economists. Although mainly undergraduate, these typical respondent has self-selected himself into studying economics. It is not surprising that there are significant differences between students of different subjects, the surprising part is possibly the fact that these groups exert different conceptions of justice. These results are supported by an extensive study by Heinrich et al. (2001), uncovering large deviations in offers and acceptance thresholds amongst 15 small-scale societies when performing an ultimatum game. On the other hand, Ball & Cech (1996, cited in Konow, 2003) report, with one exception, that they “find little evidence of subject pool effects” when comparing students with non-students. What this means is that even though there might be no difference between students and non-students in general; there might be important differences between different types of students. The same will of course apply to different types of people, but the differences are most easily discovered when dealing with groups of students because of the apparent self-selection and ease of categorisation. Typically, what you study reflects an important aspect of your set of values. When performing studies one must therefore carefully evaluate the subject pool.

Another widely applied game is the *Dictator game*. This game is well known, and has been performed all over the world on several types of demographic groups. The dictator game’s most appealing feature is that its design allows checking for altruistic behaviour in the subjects. It performs as follows. There are traditionally two players, with player one named as dictator. The dictator is faced with a sum of money to allocate between them. The dictator then decides on a split and player two simply receives his allocation. In this game, the non-dictator has no power at all to reciprocate an unfair allocation made by the dictator. Thus, any profit maximising dictator would, in this game, give nothing to the other player. This is not what experiments show. The work of Forsythe et al. (1994; cited in Nelson,

2001¹⁰) shows that in the dictator game the distribution of the divisions is bimodal, with 21 per cent of the offers being either half or zero with the rest of the offers scattered between half and zero. A common objection to the results from standard game experiments, often made by economists, is that raising the stakes will lead to different results, moving the behaviour closer to self-interest. Camerer (2003, pp. 60-62) gives an overview of the role of stakes in the ultimatum game. He concludes that raising the stakes only has a modest effect on rejections, and little effect on offers, with offers moving towards the equal split because possible rejections are more costly.

Critics of the game theoretic approach claim that the results from these games are flawed because the money the players are given to share come as “manna from heaven”. These critics hold the view that the players act differently when dividing money they did not “earn” than they would have, had they worked to earn the money. It is hard to contest the view that money from “nowhere” should be divided equally (provided no other exceptional differences). Another flaw that is common to all the experiments above is that they miss one important aspect of human interaction. While they clearly support the view that people are motivated by fairness norms, they say nothing about the general structure of people’s fairness norms. Cappelen et al. (2005) have designed a version of the dictator game that seeks to sort out both these objections. This experiment will be presented at length below, and will form the foundation of my own survey.

So, what is the conclusion we can draw from looking at these empirical results? Firstly, we can say that experimental economics is a fruitful approach. Secondly, I think it is safe to assume that the standard assumption that people act rationally does not hold. The effects of positive and negative reciprocity are clearly important, as are cultural and social differences. It is also established that subject-pool effects cannot be ignored when performing experiments. Lastly, we can say that neither of the experiments above say anything about the prevalence of distributive principles. They do establish that people have moral concerns, but they say nothing about the nature of these concerns. What is apparent is that work has to be done on making the experiments more realistic, closer to the “real” world if we are to draw fruitful conclusions from the results from future experiments.

¹⁰ In Nelson (2001) there is a reference to Forsythe et al. (1988). This is clearly a mistake since in his list of references there is no mention of this, only Forsythe et al. (1994). In addition, I have not been able to find *any* article written by Forsythe et al. in 1988.

3.2 The Cappelen et al. Experiment

In contrast to the traditional assumption that the structure of fairness norms are the same across people, and that people only differ in the weight they attach to these considerations, the experiment of Cappelen et al. proposes that people adhere to different norms. Their experiment is designed in such a way as to aid in the process of revealing both the prevalence of distributional principles and weight people attach to fairness considerations. The experiment is a developed version of the dictator game with joint production. As the players can differ both with respect to effort and with respect to talent, different fairness ideals give different answers to what a fair distribution of the production is. The fairness ideals proposed in Cappelen et al. are: strict egalitarianism, liberal egalitarianism and libertarianism. The strict egalitarian ideal they have divided in two groups: the strong version of strict egalitarianism (SES) and the weak version of strict egalitarianism (SEW). The reason is that in the context of this experiment the egalitarian ideal may be interpreted in two different ways. SES is where the gross total income is distributed equally, and SEW is where the net total income is distributed equally. SEW may also be given a welfarist interpretation. Deriving the welfarist position, however, they assume that “all individuals derive the same welfare from income and that the marginal welfare is decreasing in income.” Thus, the players are compensated for their investment and then get an equal share of the net gain. This is to say that they are not held responsible for their talent, and that they are compensated, not rewarded, for their effort. The positions are similar to the description above. In the libertarian position people are held responsible both for their talent and for their effort. In the strict egalitarian position people are held responsible neither for talent, nor for effort. The liberal egalitarian position dictates that they are held responsible for effort but not for talent, as usual.

The authors “estimate the share of the population motivated by each of the four fairness ideals and the mean value and the variance in the parameter measuring the importance people attach to fairness considerations.”

The participants are randomly paired and asked to share the joint production. The participants have full information about their own the opponent’s talent and effort. All respondents were recruited amongst first year students from the Norwegian School of Business Administration, Bergen. The game was performed in an anonymous manner in a web-based interface.

At the beginning of the game, each participant was given money credits equal to NOK 300, and randomly assigned a high or low rate of return. The high rate of return quadrupled their investment, while the low rate of return doubled their investment. The rate of return is referred to as “talent”, i.e. the factors outside the control of the agent. In the first phase of the game, the production phase, the players were asked to invest a portion of their given credits in two games. They were allowed to invest NOK 0, NOK 100 or NOK 200. Any money left after investing in the two games they were allowed to keep. The player’s chosen investment can be seen as their “effort”, i.e. the factors within the control of the agent.

In the second phase of the game, the distribution phase, the players were paired with a different opponent for each game, and asked to decide upon an allocation of the joint production. The dictators had full information about the opponent’s rate of return and investment. Each player was paired with an opponent who had the same rate of return in one game, and a different rate of return in another game. The players could thus differ both with respect to talent and with respect to effort, giving rise to four different distributional situations. The principles of distributive justice employed by Cappelen et al. were as mentioned: strict egalitarianism (with SES and SEW), libertarianism and liberal egalitarianism. The game produced 190 distributions from 96 players¹¹.

Initially, the results from the game indicate that the most prevalent moral type is the liberal egalitarian, represented by 40.78 per cent of the population, 33.42 per cent SES, 8.77 per cent SEW and 17.03 per cent libertarians¹². When performing robustness checks Cappelen et al. find that with the exception of the weak version of strict egalitarianism, dropping one of the moral ideals made a great impact on the results. They conclude that the strong and the weak version of strict egalitarianism are not very well separated in the data, because when dropping SEW “neither the log-likelihood nor the other data are much affected”. This means that specification 3 from table 6 in appendix 3 is the preferred specification of Cappelen et al. with 43.4 per cent liberal egalitarians, 39.7 strict egalitarians and 16.8 per cent libertarians. Specification 1, where no ideals are dropped, and specification 3, where the weak version of strict egalitarianism is dropped, are depicted in the table below.

¹¹ One player was excluded due to entering an illegal amount.

¹² These percentages are from specification 1. The complete empirical distribution and all the specifications can be seen in Appendix 3: Table 6 from Cappelen et al.

Table 1, The Prevalence of Distributional Principles

Cappelen et al, 96 players, 190 distributions.		
	Specification 1, per cent	Specification 3, per cent
SES	33.42	39.71
SEW	8.77	--
Libertarian	17.3	16.81
Liberal egalitarian	40.78	43.38

The authors make three observations based on the estimates presented above, two of which I will present. Firstly, the estimates show that there is considerable variation in the fairness ideals that motivate people, even in simple situations like the game utilised by Cappelen et al. and in a homogenous subject group. Secondly, about 60 per cent of the respondents (libertarians and liberal egalitarians) care about investment made by the opponent when deciding how much to offer.

The distributions of offers in the game were slightly higher than what is commonly observed, with 27.1 per cent being the average offer and 29.2 per cent the median. 30 per cent of the players offered the opponent nothing, and the highest offer was 80 per cent. 27 per cent of the offers were exactly fifty-fifty. Performing descriptive regressions the authors discovered that on average the players demanded almost the full own production but only 65 per cent of the opponent's production. They also found that ones own investment had a larger effect than the opponent's investment, and that ones own talent had a larger effect than the opponent's talent. Two out of 96 players actually made offers that were not consistent with any of the proposed fairness ideals and 75 out of 96 players made offers that were consistent with all of the four norms. This, the authors claim, shows that a revealed preference approach cannot elicit the prevalence of fairness ideals.

The structural estimates of the model gives an idea of the effect of the various moral strengths¹³. The lower end of the population, in terms of their moral strength, has no inner maximum and typically demands the full production. For median moral strength the most popular choice is to demand NOK 150 more than that implied by the moral norm. The upper third demand no more than their fair share.

¹³ Figure 2 in Cappelen et al. provides the full estimates.

An assumption made in the article is that individuals have a constant moral ideal independent of the distributional situation. Alternative approaches emphasise self-deception (Konow, 2000) where the individuals would decide on ideals after the distributional situation was known, choosing the moral ideal that would benefit them the most. Cappelen et al. test whether the individuals have this self-interested forming of moral ideals by checking if the players consistently ask for more in situations where there is room for self-interested behaviour. Choosing a moral self-interestedly would, on average, give 9.3 percentage points more to one-self of the total production. They find a difference of only 2.2 percentage points between the amount demanded, and this small difference is not statistically significant. Their conclusion is that there is little reason to suspect that it would invalidate their analysis.

Cappelen et al. recognise in their paper that their subject pool is homogenous, consisting only of first-year economics students. Considering the work of Fehr & Schmidt (2004), choosing players from such a homogenous subject pool seems wrong if the object is to discover the prevalence of distributive principles in the population at large. This point needs to be addressed.

Lastly, in the current experiment there are only two factors representing a person's array of exogenous and discretionary variables, in which the players can differ. These factors are their rate of return and their investment. This simplification is, although understandable given the feasibility of the project, too simple. It makes it all too clear for the dictator to untangle the different factors when making the allocation. In the real world, the cut between controllable and non-controllable factors is unclear even for each person to himself. This point too needs to be addressed.

Even though the Cappelen et al. paper brings the game theoretic approach forward in many aspects, the experiment is lacking in the points above, viz. the selection of respondents from a homogenous group of students, and in addition, their cut between discretionary and exogenous variables may be too clear. The following vignette survey will try to address these points, but due to its concise character will inevitably miss key points that are more thoroughly covered in Cappelen et al.

4. Experimental procedure

When deciding on the design of the survey two concerns are important. Firstly, it is the issue with the homogenous subject pool in Cappelen et al. Secondly, the issue with the cut between effort and talent. I choose to apply the method of a vignette survey in order to address these two issues.

In the experiment by Cappelen et al. the cut between effort and talent is made quite clear, unlike in the real world. To replicate the blurry line between factors the agent can and cannot control, I introduce a new variable, pay per page, to make the distinction between discretionary and exogenous variables more unclear. As pointed out above, the Cappelen et al. experiment used a homogenous group of respondents, but since research indicates that there may exist significant differences between different groups of society regarding the opinion on distributional policies, and justice in general¹⁴, I find it purposeful, and indeed essential, to conduct the survey utilising two groups of subjects.

Using a vignette survey also allows me to evade the problem of self-serving bias. Evidence from Konow (2000), amongst others, shows that there can be a self-serving distortion of justice in cases where the respondent has a personal interest in the outcome of the allocation process. This distortion may reduce the disutility of pursuing unfair allocations, allowing the implicated stakeholder to perceive his unfair allocation decision as fair. The self-serving distortion then acts as an obstacle to understanding unbiased justice. By using vignettes the respondent is placed in a situation of a disinterested observer, thus enabling him to view the allocation solely as fair or unfair without the distorting self-interest effect or expectations of any kind of reciprocity often found to be a significant factor in game experiments¹⁵. Cappelen et al. do not evade this problem, and for a good reason. The

¹⁴ Fehr and Schmidt (2004) report evidence that there are significant differences between economists and non-economists, as do N  f (2002).

¹⁵ This is an attempt at replicating ‘‘The Benevolent Dictator Treatment’’ in Konow (2000). In ‘‘The Benevolent Dictator Treatment’’, the dictator’s stake in the outcome is removed. Two groups in room A and B perform tasks, contributing to a common pool of funds. The dictators are placed in room C and are to decide the allocation for their anonymous counterparts in rooms A and B.

design of their experiment is such that it reveals people's true moral sentiment *when* they are misguided by the self-serving bias¹⁶.

Common to both Cappelen et al. and my own experiment is that they avoid the "manna from heaven"-critique. The vignette survey accomplishes this using third person situations, i.e. the person deciding on the fair distribution has no financial interest in the outcome, and through the description in the vignettes where the two persons actually work to contribute to the creation of the funds. Cappelen et al. make use of the latter.

The vignette method is of course not without its drawbacks. One of them lies in its simplicity. Because it relies on the respondents reading a short text, there is always the risk that the respondents misinterpret the meaning of the text. Another drawback, compared to the design of Cappelen et al. is that it lacks the complexity that allows the extraction of useful information like the weight people put on the distributive principle they adhere to. On the other hand, its simplicity allows for uncomplicated execution of the experiment and speedy extraction of data. Performing the experiment without real money is another concern. This can make the respondents give the wrong answers because they do not see the experiment as important. You may get different answers when asking respondents to propose a division of real funds between two people actually observed working and when the respondents are asked to decide on the fair allocation of fictional funds in the vignette survey. This is not at all surprising, but because both time and financial resources were limited (and nonexistent respectively), the vignette design was preferred.

4.1 Selection of Subjects

Since one purpose of the experiment is to explore the implications of different selections of subjects, I will carry out the survey using two subject pools, viz. students from the Department of Economics, University of Oslo and students from the Faculty of Theology, University of Oslo. I do not, however, feel that it is necessary to discriminate between undergraduates and graduate students as Carter and Irons (1991, cited in Camerer, 2003) report no difference between first-year students and seniors in their research. The decision to use these two groups of students arose from my perception that this would most clearly show if there were any differences at all between different types of students.

¹⁶ The self-deception problem (Konow, 2000), it is concluded, is insignificant.

I aim at finding 40 respondents from both subject pools. Ideally, both pools should have been larger, but with the limited time span of this thesis, the small number is dictated by practicality. The students will be picked from random courses taught at the Department of Economics and the Faculty of Theology.

4.2 Course of Action

I will enter the selected class and explain my affiliation and the purpose of the questionnaire. After having given the brief introduction, I will hand out the questionnaire to those who wish to participate, and they will remain seated in the auditorium when answering the questions.

The vignettes will place them in situations where a division of funds is to be made. After having read through each vignette they will have to choose the distribution they regard as fair, either alternative A or alternative B. The participants will have approximately 10 minutes to complete the questionnaire with the three vignettes. When they are done, they will leave the auditorium after having placed the completed questionnaire on a table by the exit, thus assuring some degree of anonymity.

4.3 The Vignettes and their Rationale

Question 1

Michael and Roger are two freelance journalists. Michael is writing about culture and Roger is writing about business. They both spend 40 hours per week writing and they produce 10 pages each per week. The newspaper pays \$50 per page for culture and \$100 per page for business. In distributing the total production value between the two journalists, what is fairer:

A: \$750 per week to Michael and \$750 per week to Roger, or

B: \$500 per week to Michael and \$1000 per week to Roger?

Question 2

Michael and Roger are two freelance journalists. Michael is writing about culture and Roger is writing about business. They both spend 40 hours per week writing. Michael produces 10 pages per week, while Roger produces 15 pages per week. The newspaper pays \$50 per page both for culture and for business. In distributing the total production value between the two journalists, what is fairer:

- A: \$625 per week to Michael and \$625 per week to Roger, or
- B: \$500 per week to Michael and \$750 per week to Roger?

Question 3

Michael and Roger are two freelance journalists. Michael is writing about culture and Roger is writing about business. Michael spends 20 hours per week writing while Roger spends 30. They both produce 10 pages per week. The newspaper pays \$50 per page both for culture and for business. In distributing the total production value between the two journalists, what is fairer:

- A: \$500 per week to Michael and \$500 per week to Roger, or
- B: \$400 per week to Michael and \$600 per week to Roger?

The rationale behind the design of the vignettes is the following. As stated in Cappelen et al., people in their experiment can differ both with respect to their effort (money invested) and with respect to their talent (rate of return). In the vignettes these two variables are “hours per week” and “pages per week” respectively. In order to broaden the spectrum of the survey, making distinction between effort and talent unclear, I introduce a third variable “pay per page”. Using the terminology of Konow (2000) “talent” and “pay per page” are exogenous variables that the person cannot reasonably control, while “effort”, controllable by the person, is the only discretionary variable. It can be argued, though, that a person’s talent to a certain degree is a discretionary variable as talent certainly *can* be influenced by a person’s effort if we by talent mean simply the task of typewriting. If we on the other hand by talent mean the preconditions a person has for writing, i.e. the creative skills needed, the argument for classifying ability as an exogenous variable is strengthened. The same line of reasoning also applies to “pay per page”. A person working for a newspaper *does* have the

power to influence his pay per page, if not personally then through the union, but let us here suppose that “pay per page” is out of range of the influence of the journalists. Addressing the discretionary variable “effort”, other authors have argued that this also may be an exogenous variable. It can be said that a person’s effort is the result of his upbringing and genetic heritage, so that in the end people are not responsible for any of their choices. Putting all these counter-arguments aside and sticking to the claim that “hours per week” is the only discretionary variable, this gives rise to several possible distributional situations.

The situation in the first question is when the two are equal both with respect to pages produced per week, i.e. “talent”, and with respect to hours worked per week, i.e. “effort”, but different with respect to “pay per page”. In this situation, disregarding the pay per page, all moral sentiments give the same answer to the distributional problem, viz. equal shares to both. When taking into account the pay per page one theory differs from the others, viz. libertarianism. Libertarianism states that each person is rewarded according to the value of their production, given as a product of “effort”, “talent” and “pay per page”. Therefore, a respondent choosing alternative B as the fairer alternative reveals a sentiment corresponding to libertarianism, while a respondent choosing alternative A corresponds to either egalitarianism, or liberal egalitarianism.

Another possibility is that they are equal with respect to “effort” and “pay per page”, but differ with respect to “talent”, as in question 2. In this case, alternative A represents egalitarianism and liberal egalitarianism while alternative B represents libertarianism, as in the previous question. The distinction between the two lies in the cause of the difference in the value of production. In question two, it is caused by something that is part of the person, viz. talent. Although an exogenous variable, it is difficult to entangle a person’s talent for performing a task from that person’s effort exhausted on trying to master it. Talent may easily be perceived as more within control of a person than pay per page is, and may thus cause a higher tendency amongst the respondents to deviate from the egalitarian alternative.

In question three the two are equal with respect to “talent” and “pay per page”, but they exhaust different amounts of effort. Since “talent” and “pay per page” are exogenous variables, they are irrelevant for the liberal egalitarian sentiment. Question 3 is the only question where the two differ with respect to a supposedly discretionary variable and the only question where the liberal egalitarian distribution is different from the egalitarian. We thus see that alternative A represents egalitarianism alone, while alternative B represents libertarianism and liberal egalitarianism. The sentiments corresponding to the different alternatives in the three questions are presented in the table below.

Table 2, Corresponding Sentiments

	A	B
Question 1	E, LE	L
Question 2	E, LE	L
Question 3	E	LE, L

Summing up the alternatives corresponding to the different sentiments we can successfully place the respondents according to the table below, in accordance with the division made in chapter 2.

Table 3, Classification of the Respondents

	Question 1	Question 2	Question 3
Egalitarian	<i>A</i>	<i>A</i>	<i>A</i>
Liberal Egalitarian	<i>A/B</i>	<i>A/B</i>	<i>A/B</i>
Libertarian	<i>B</i>	<i>B</i>	<i>B</i>

A respondent answering alternative A to all three questions will be categorised as an egalitarian, placing no responsibility on the worker; a respondent answering alternative B in all three questions will be categorised as a libertarian, placing full responsibility on the worker, and finally; the respondent choosing any of the six combinations of A and B is classified as some form of liberal egalitarian. A more thorough classification of the latter category may be necessary, depending on the results from the survey. The classical liberal egalitarian answer is A, A, B respectively. This means that the respondent holds the worker responsible for the amount of hours he chooses to work, but not for his talent or his pay per page. Another option, closer to libertarianism, is the answer A, B, B, where the worker in addition is held responsible for his talent. In the discussion of liberal egalitarianism and the responsibility cut this category was called meritocratism, and it implies that the agent is held responsible solely for his productivity, not for the value of his production. The difference from the classic case is that talent, represented by pages per week, is included as a controllable variable.

Contrary to Cappelen et al., I choose to divide the classification of moral sentiments into three different groups, following the description above. The reason for doing this is that I wish to expose the difference between holding people responsible for nothing, everything and something. When collecting all the different answers that do not comply with holding people responsible for either all or nothing into liberal egalitarianism, I highlight this difference. Cappelen et al. conclude in their paper that the main difference between the moral sentiments lays between libertarianism, egalitarianism and liberal egalitarianism, justifying this decision when the objective is to see if the results hold when correcting for the issues mentioned above.

4.4 Results

The first survey was conducted at the Faculty of Theology, University of Oslo, May 9, 2005, at 11am. The class selected was an undergraduate course and was selected because of its size, being the largest class available. The course was taught in Norwegian, but the students have to be rather familiar with reading English as much of compulsory reading is in English. 37 questionnaires were handed out, and 37 questionnaires were answered. The complete results can be found in the appendix.

In the first question, where the two journalists differ with respect to “pay per page”, only 8.11 per cent chose alternative B in which the two are awarded according to the value of their production. Thus, the vast majority chose the egalitarian alternative, paying no respect to the difference in the exogenous variable “pay per page”. In question 2, the percentage that chose alternative B was 67.57. As predicted, the deviation from the equal alternative was much higher here than in question one. It may, however, be the case that the reason for the significant increase in alternative B answers stems from something else than a perception of “talent” being less exogenous than “pay per page”. What strengthens the view that pages per week is more easily seen as a controllable variable than pay per page, is the fact that 88 per cent of the respondents choosing alternative B in question 2 chose alternative A in question 1. In addition we observe the fact that none of the respondents who chose alternative A in question 2 chose alternative B in question 1. Question 3 had the same percentage of alternative B answers (67.57), but only 37.84 per cent of the respondents chose alternative B in both questions 2 and 3.

Table 4, Percentages: Survey 1

Survey 1, Faculty of Theology, n=37		
	Alternative A (per cent)	Alternative B (per cent)
Question 1	91.89	8.11
Question 2	32.43	67.57
Question 3	32.43	67.57

Regarding the classification of the respondents into the described moral sentiments there were some interesting results. Only one respondent (2.7 per cent) was classified as egalitarian and no respondents were classified as libertarians. A further division of the category liberal egalitarian may be interesting at this stage in order to see what factors the respondents put most weight on. The majority of the respondents, 37.84 per cent, gave answers corresponding to meritocratism, with 29.73 per cent “pure” liberal egalitarians following close behind. What was particularly interesting was the rather large proportion of respondents choosing alternatives A, B, A respectively. These respondents only deviate from the equal split when the journalists differ with respect to talent. This is rather interesting as it reveals a preference for letting inequalities arising from differences in talent sustain, while redistributing to equalise differences in work effort. I choose to label this sentiment “elitistic”. Another variation of the liberal egalitarian sentiment was the occurrence of respondents answering B, B, and A respectively. This was rather negligible though, only represented by three respondents (8.11 per cent). I choose to label this as sentiment as “quasi libertarian” as according to this view you only choose the equal split when the journalists differ with respect to the one intuitively discretionary variable.

Table 5, Classification: Survey 1

Survey 1, Faculty of Theology, n=37	
	Per cent
Egalitarian (AAA)	2.7
Libertarian (BBB)	0
“Pure” Liberal egalitarian (AAB)	29.73
Meritocratic (ABB)	37.84
Elitistic (ABA)	21.62
Quasi libertarian (BBA)	8.11

The second survey was conducted at the Department of Economics, University of Oslo, May 13, 2005, at 3pm. The class selected was a graduate course containing a rather significant number of foreign students from various countries. The course was taught in English, thus everyone supposedly possessed the skill to understand the vignettes. 36 questionnaires were handed out and 35 were handed back in.

The results from the second survey were quite different from the results of the first. In the second survey, 60 per cent of the respondents chose alternative A in the first question. In the second question, the proportion of A-answers was 22.86 per cent, approximately 10 percentage points lower than in the first survey. The proportion of A-answers in question three was at 48.57 per cent, about 16 percentage points higher than survey one. Regarding the individual combination of A or B answers, apart from the combination B in question 2 *and* B in question 3, this was also quite different from the first survey. The fraction of respondents answering A on question 1, given that they answered B on question 2 was at 55.56 per cent. This is circa 30 percentage points lower than in the first survey. 25 per cent of the respondents in the second survey who answered A on question 2 answered B on question 1. In the first survey, there were none with this combination.

Table 6, Percentages: Survey 2

Survey 2, Department of Economics, n=35		
	Alternative A (per cent)	Alternative B (per cent)
Question 1	60	40
Question 2	22.86	77.14
Question 3	48.57	51.43

The classification of the respondents from the second survey yielded quite different results from the first survey. Firstly, there were no responders classified as egalitarians (there was one in survey 1). Secondly, there was a marked occurrence of libertarians (there were none in survey 1). Thirdly, there were two new combinations of answers in the liberal egalitarian category. One respondent gave the following combination of answers; ABA, to the questions 1-3 respectively, and one respondent gave the combination BAB. I have not named these combinations as the fraction of respondents complying with them is negligible. The proportion of classical liberal egalitarians (AAB) in the second survey was 17.14 per cent. This was a little over 10 percentage points lower than in survey 1. As already mentioned there was a drastic increase in the number of libertarians, at 11.43 per cent compared to 0 per cent in survey 1. The majority of the respondents in survey 2 were classified as meritocrats, as in survey 1, but the percentage was lower at 25.71 per cent compared to 37.84 per cent in survey 1. Survey 2 yielded a slightly lower fraction of elitists than survey 1, with 17.14 compared to 21.62 but there was an evidently higher percentage of quasi libertarians in survey 2, with 22.86 per cent compared to 8.11 per cent from survey 1.

Table 7, Classification: Survey 2

Survey 2, Department of Economics, n=35	
	per cent
Egalitarian (AAA)	0
Libertarian (BBB)	11.43
“Pure” Liberal egalitarian (AAB)	17.14
Meritocratic (ABB)	25.71
Elitistic (ABA)	17.14
BBA	22.86
BBA	2.86
BAB	2.86

The most important difference between the two groups of respondents is the fact that they differ with respect to the percentage of all A answers and all B answers. The different combinations of A and B answers only strengthens the assumption that people generally do not award full responsibility or no responsibility at all. In the table below, I have pooled the different liberal egalitarian variations together in order to highlight the fact that there is little variation between the two groups in the percentage of liberal egalitarian answers. This table also highlights the fact that there are no libertarians in the group from the Faculty of Theology, while there are no egalitarians in the group from the Department of Economics.

Table 8, Classification: Comparing Survey 1 & 2

	Faculty of Theology, n=37	Department of Economics, n=35
Egalitarian	2.7%	0%
Libertarian	0%	11.43%
Liberal egalitarian	97.3%	88.57%

The two groups look remarkably similar when all the liberal egalitarian alternatives are pooled together in this fashion, but the dissimilarity is likewise strikingly apparent. The fact that there are no libertarians amongst the respondents from the Faculty of Theology, and

no egalitarians amongst the respondents from the Department of Economics simply cannot be ignored, even though the groups are on the small side.

5. Discussion and comparison

The surveys I have conducted have focused on the just distribution of funds from joint production, but the results may be applicable to a wider array of economical and social questions. The results from the surveys give an idea of the public's opinion on how redistributive policies should be conducted, the principle they should follow. If the liberal egalitarian ideal of justice is applied, this means that people may be held responsible for many of their self-afflicted problems, like smoking related diseases or venereal diseases. Medical expenses connected to such diseases would have to be born by each individual, and this topic is extremely controversial, at least in Norway. Another difficult situation in the same category is invalidity resulting from sports and leisure activity. Should these expenses also be born by the individual? The important point to stress in these circumstances is that we are talking about free and informed choices. Clearly, this leads to a difficult discussion but the point is that a better understanding of people's moral motivation will lead to a more fruitful discussion of these difficult questions, not only when it comes to the topic of healthcare, but also unemployment benefits and taxation.

One of the most striking results the surveys produced was the total lack of libertarians amongst the students of theology and the non-existence of egalitarians amongst the students of economics. This may indicate that economists do not generally care for the unconditional redistribution policy of egalitarianism, while "other" people see the no-redistribution policy of libertarianism as unfair. The fact that the non-economists chose the egalitarian alternative more frequently than the economists did supports Fehr & Schmidt (2001) in their conclusion that there exists strong subject pool effects. They too concluded that non-economists tended to be more concerned with equality than economists were.

What is obviously clear is that some form of liberal egalitarianism is the most prevalent moral principle, regardless of groups. Both amongst the economist and amongst the "others" the liberal egalitarian principle accounts for close to (and over) 90 per cent of the respondents. This is to some degree supported by the Cappelen et al. experiment where the liberal egalitarian view is supported by 43.4 per cent of the players¹⁷. Further, it is quite striking that about 60 per cent of the players (libertarians and liberal egalitarians) in the

¹⁷ Using specification 3 in table 2 of appendix 3.

Cappelen et al. experiment and well over 90 per cent of the respondents of my two surveys care about controllable factors when deciding on the distribution. This fact is one of the most interesting finding of the survey. A further specification of the factors that are relevant for redistributional policy is of course necessary, but the cases where there is no redistribution at all or no responsibility at all are both ruled out, if public opinion is any sort of measure. Amongst the different liberal egalitarian alternatives that arose in the survey, the meritocratic position was the most prominent in both groups, represented by over 37 per cent in the first survey and over 25 per cent in the second survey. This position reveals that people tend to consider pages per week as one of the controllable variables. A priori, I had considered this to be an exogenous variable, representing the person's non-controllable skill of writing, meaning some people naturally use more words saying as much as another person using less. No matter where the responsibility cut is drawn, all the liberal egalitarian alternatives share the basic liberal egalitarian idea; all people should be given the same opportunities. This, I think, is also what motivates the majority of the respondents in both surveys.

So how do the results compare with Cappelen et al, in particular with respect to the issues of homogenous groups and the responsibility cut? In table 9 below the two experiments are compared. At once, you see that liberal egalitarianism is the most prevalent principle in both experiments. In my vignette survey it is also the principle preferred by the majority of the respondents. In the Cappelen et al. experiment the number of players preferring egalitarianism and libertarianism exceed the number of players preferring liberal egalitarianism.

Table 9, Classification: Comparing Survey 1+2 & Cappelen et al.

	Survey 1+2, n=72	Cappelen et al, n=96, 190 distributions.
	Per cent	Per cent
Egalitarian/SES	1.4	39.7
Libertarian	5.6	16.8
Liberal egalitarian	93	43.4

The question to ask is then: why do we see this large difference in the percentage of liberal egalitarians between the two studies? One answer to this question may be that it is the

result of the blurring of the cut between exogenous and discretionary factors. When the respondents cannot clearly distinguish between the two, they may be more liable to choose any of the liberal egalitarian alternatives. The reason for this is that when the cut very clear, or indeed over-simplified; respondents who are on the edge between norms, may have a greater tendency to tip in the extreme direction, i.e. choosing either full responsibility or no responsibility instead of the partial responsibility. When there are several factors in the picture, as in real life, respondents are more liable to go with liberal egalitarianism, because it makes the justification of the choice easier, or indeed more in accordance with the person's actual moral standard. These results show the importance of a correct contextualisation when performing game experiments, as the fact that the responsibility cut went from very clear in Cappelen et al. to a little more unclear in my survey contributed to doubling the share of liberal egalitarians. In a forthcoming study, Cappelen et al. perform an experiment where people actually work. Preliminary results from this experiment also support the assumption that a blurring of the responsibility cut will raise the share of liberal egalitarians.

Some of the respondents in my two surveys gave quite strange answer, or answers that did not conform to my a priori assumptions. The rather large occurrence of so-called quasi libertarians amongst the economics students certainly puzzled me. Why would someone regard work effort as non-controllable? This seems like the result of very irrational reasoning, or the result of misunderstanding the vignettes. The fact that this group did not occur amongst the students of theology does not contribute to the understanding. The results do, however support the conclusion of Heinrich et al. (2001) that the rational-actor framework typically applied by economists is at best questionable.

To sum up, what I have found is the following. Firstly, we have the similarities. Common to both studies is the fact that the majority of the respondents care about effort when taking allocation decisions. In the case of my survey the majority of the respondents caring about effort were liberal egalitarians with a minor percentage of libertarians, while in Cappelen et al. the share of libertarians was much higher. Another common feature the studies share are that the liberal egalitarian position is the most prevalent. Secondly, features that separate the two studies. The percentage of liberal egalitarians position was much higher in my study, over double that in Cappelen et al. As suggested, this could be attributed to the location and clarity of the responsibility cut and shows the importance of contextualisation in game experiments. Lastly, the differences between the two groups of my survey show that subject pool effects clearly cannot be ignored. If one chooses to draw subjects from a

homogenous subject pool, one must be aware of the possible consequences this could have for the results of the experiment.

When working out the design of the vignettes in the survey the aim was not to replicate the situation in the Cappelen et al. experiments as closely as possible, but rather to focus on the issue of the responsibility cut and being able to classify the respondents into the different groups. The vignettes had to be as short as possible, while still containing all the relevant information for the respondents to make a qualified choice. It may be that some of the respondents misinterpreted the text, thus choosing a different alternative than they would have, had they understood the true intention of the text. This is always a problem when handing out a written text, and not explaining it personally to every respondent. Another drawback of using the vignette format is that the respondents are not playing with real money. This can distort the results, and in this respect the Cappelen et al. study is better. Performing experiments with or without real money is also a question of accessible funds. However, the vignette surveys seem to have produced some interesting results, and comparing them to the results from Cappelen et al. there are apparent similarities. The number of respondents in both my surveys being quite low, conclusions drawn from the results obviously cannot be strong, but the tendencies are apparent and convincing. It would be quite interesting to conduct the survey on a larger number of groups and respondents in order to be able to draw stronger conclusions. Regardless, the subject of distributive principles and the location of the responsibility cut deserve more attention in future research.

References

- Ball, Sheryl B. & Cech, Paula-Ann (1996): "Subject Pool Choice and Treatment Effects in Economic Laboratory Research." *Research Experiment. Econ.* 6, pp. 239-292.
- Blount, Sally (1995): "When Social Outcomes Aren't Fair: The Effect of Causal Attributions on Preferences." *Organizational Behaviour and Human Decision Processes*, Vol. 63, No. 2 (August), pp. 131-144.
- Camerer, Colin F. (2003): *Behavioral Game Theory*, New York, N.Y.: Russel Sage Foundation Princeton University Press.
- Camerer, Colin F.; Loewenstein, George & Rabin, Matthew (Ed.) (2003): *Advances in Behavioral Economics*, New York, N.Y.: Russel Sage Foundation Princeton University Press.
- Carter, John R. and Irons, Michael D. (1991): "Are economists different and if so, why?" *Journal of Economic Perspectives*, Vol. 5, No. 2 (Spring), pp. 171-177.
- Cappelen, A. W.; Hole, A.; Sørensen, E. Ø. & Tungodden, B. (Forthcoming): "The Pluralism of Fairness Ideals: An Experimental Approach." SNF Working Paper, No. A30/05.
- Cappelen, A. W. & Tungodden, B. (2004): "Rewarding Effort." SNF Working Paper, No. 65/04.
- (2005): "Personal Responsibility and Income Distribution." SNF Working Paper, No. A13/05.
- Crocker, Lawrence (1977): "Equality, Solidarity, and Rawls' Maximin." *Philosophy and Public Affairs*, Vol. 6, No. 3 (Spring), pp. 262- 266.
- Dworkin, R. (1977): *Taking Rights Seriously*, London: Duckworth.
- (1983): "In Defence of Equality." *Social Philosophy and Policy*, Vol.1, No. 1, pp. 24-40.
- (1986): *Law's Empire*, Cambridge, Mass.: Harvard University Press.
- (1987): "What is Equality? Part III: The Place of Liberty." *Iowa Law Review*, Vol. 73, No. 1, pp. 1-54.
- Engelmann, Dirk & Strobel, Martin (2002): "Inequality Aversion, Efficiency, and Maximin Preferences in Simple Distribution Experiments." *The American Economic Review*, Vol. 94, No. 4 (September), pp. 857-869.
- Fehr, Ernst & Gächter, Simon (2000): "Fairness and Retaliation: The Economics of Reciprocity." *The Journal of Economic Perspectives*, Vol. 14, No. 3 (Summer), pp. 159-181.

-
- Fehr, Ernst & Schmidt, Klaus M. (2004): "The Role of Equality, Efficiency, and Rawlsian Motives in Social Preferences: A Reply to Engelmann and Strobel." Working Paper No. 179, Institute of Empirical Research in Economics, University of Zurich.
- Forsythe, Robert; Horowitz, Joel L.; Savin, N. E. & Sefton, Martin (1994): "Fairness in Simple Bargaining Experiments." *Games and Economic Behavior*, Vol.6, Is. 3, pp. 347-369.
- Güth, Werner & van Damme, Eric (1998): "Information, Strategic Behavior and Fairness in Ultimatum Bargaining." *Journal of Mathematical Psychology*, Vol. 42, Is. 2-3, pp. 227-247.
- Harsanyi, John C. (1985): "Does Reason Tell Us What Moral Code To Follow and, Indeed, to Follow Any Moral Code at All?" *Ethics*, Vol. 96, No. 1 (October), pp. 42-55.
- Henrich, Joseph; Boyd, Robert; Bowles, Samuel; Camerer, Colin; Fehr, Ernst; Gintis, Herbert & McElreath (2001): "In Search of Homo Economicus: Behavioral Experiments in 15 Small-Scale Societies." *The American Economic Review*, Vol. 91, No. 2 (May), pp. 73-78.
- Konow, James (2000): "Fair Shares: Accountability and Cognitive Dissonance in Allocation Decisions." *The American Economic Review*, Vol. 90, No. 4 (September), pp. 1072-1091.
- (2001): "Fair and square: the four sides of distributive justice." *Journal of Economic Behavior & Organisation*, Vol. 46, pp. 137-164.
- (2003): "Which Is the Fairest One of All? A Positive Analysis of Justice Theories." *Journal of Economic Literature*, Vol. 41 (December), pp. 1188-1239.
- Kymlicka, Will (1990): *Contemporary Political Philosophy: An Introduction*. Oxford: Clarendon Press.
- (Ed.) (1992: *Justice in Political Philosophy Volume I. Mainstream Theories of Justice*, Aldershot: Edward Elgar Publishing Ltd.
- Nelson, William Robert, Jr. (2001): "Incorporating Fairness Into Game Theory and Economics: Comment." *The American Economic Review*, Vol. 91, No. 4 (September), pp. 1180-1183.
- Nielsen, Kai (1985): *Equality and Liberty*, Totowa, NJ: Rowman and Allanheld.
- Nozick, Robert (1974): *Anarchy, State and Utopia*, NY: Basic Books.
- Pazner, Elisha & Schmeidler, David (1978): "Egalitarian Equivalent Allocations: A New Concept of Economic Equity" *The Quarterly Journal of Economics*, Vol. 92, No. 4 (November), pp. 671-687.
- Sen, Amartya K. (1970): *Collective Choice and Social Welfare*. San Francisco: Holden-Day.
- (1979): "Personal Utilities and Public Judgements: Or What's Wrong With Welfare Economics", *The Economic Journal*, Vol. 89, No. 355 (September), pp. 537-558.

- Roemer, John E. (1993): "A Pragmatic Theory of Responsibility for the Egalitarian Planner", *Philosophy and Public Affairs*, Vol. 22, No. 2 (Spring), pp. 146-166.
- Wolff, Jonathan (1998): "Fairness, Respect, and the Egalitarian Ethos", *Philosophy and Public Affairs*, Vol. 27, No. 2 (Spring), pp. 97-122.

Appendices

1. Data from Survey 1, Faculty of Theology

Respondent	Question 1	Question 2	Question 3	Sentiment
1	A	A	B	LE
2	A	A	B	LE
3	A	B	A	EL
4	A	B	A	EL
5	A	A	B	LE
6	A	B	A	EL
7	A	A	B	LE
8	A	B	B	M
9	A	B	A	EL
10	A	B	B	M
11	A	B	B	M
12	A	B	B	M
13	A	A	B	LE
14	A	A	B	LE
15	A	B	B	M
16	A	A	B	LE
17	B	B	A	QL
18	A	A	B	LE
19	A	B	A	EL
20	A	A	B	LE
21	B	B	A	QL
22	A	A	A	E
23	A	B	A	EL
24	A	B	A	EL
25	A	A	B	LE
26	B	B	A	QL
27	A	B	B	M
28	A	B	B	M
29	A	B	B	M
30	A	B	B	M
31	A	B	B	M
32	A	B	B	M
33	A	A	B	LE
34	A	B	A	EL
35	A	B	B	M
36	A	B	B	M
37	A	B	B	M

Strategies

	<i>per cent</i>	<i>Actual</i>
Egalitarian (E):AAA	2,70%	1
Liberal egalitarian (LE):AAB	29,73%	11
Libertarian (L):BBB	0,00%	0
Meritocratic (M):ABB	37,84%	14

Elitistic (EL):ABA	21,62%	8
Quasi libertarian (QL):BBA	8,11%	3

Question 1	A	B
	91,89%	8,11%
Question 2	A	B
	32,43%	67,57%
Question 3	A	B
	32,43%	67,57%

Q1:AgivenQ	88,00%
2:B	
Q1:BgivenQ	0
2:A	
Q2:BandQ3:	37,84%
B	

2. Data from Survey 2, Department of Economics

Respondent	Question 1	Question 2	Question 3	Sentiment
1	B	A	A	?
2	B	A	B	?
3	B	B	A	QL
4	A	B	A	EL
5	A	B	B	M
6	B	B	A	QL
7	B	B	A	QL
8	A	B	B	M
9	B	B	A	QL
10	A	A	B	LE
11	A	B	A	EL
12	A	A	B	LE
13	A	A	B	LE
14	A	A	B	LE
15	A	A	B	LE
16	A	B	A	EL
17	B	B	B	L
18	A	B	A	EL
19	A	B	B	M
20	B	B	A	QL
21	B	B	B	L
22	A	B	B	M
23	A	B	B	M
24	A	A	B	LE

25	A	B	A	EL
26	A	B	A	EL
27	A	B	B	M
28	A	B	B	M
29	B	B	B	L
30	A	B	A	M
31	B	B	B	L
32	B	B	A	QL
33	A	B	A	M
34	B	B	A	QL
35	B	B	A	QL

Strategies

	<i>per cent</i>	<i>Actual</i>
Egalitarian (E):AAA	0,00%	0
Liberal egalitarian (LE):AAB	17,14%	6
Libertarian (L):BBB	11,43%	4
Meritocratic (M):ABB	25,71%	9
Elitistic (EL):ABA	17,14%	6
Quasi libertarian (QL):BBA	22,86%	8
:BAA	2,86%	1
:BAB	2,86%	1

Question 1	A 60,00%	B 40,00%
Question 2	A 22,86%	B 77,14%
Question 3	A 48,57%	B 51,43%

Q1:AgivenQ 2:B	55,56%
Q1:BgivenQ 2:A	25,00%
Q2:BandQ3: B	31,43%

3. Table 6 from Cappelen et al.

parameter	specification				
	1	2	3	4	5
λ_1 , strict egalitarian, strong	0.3342 (0.0969)		0.3971 (0.0900)	0.3249 (0.1362)	0.3719 (0.1130)
λ_2 , strict egalitarian, weak	0.0877 (0.0759)	0.4032 (0.1086)		0.3958 (0.1449)	0.0963 (0.0965)
λ_3 , liberal egalitarian	0.4078 (0.0924)	0.3967 (0.1054)	0.4338 (0.0923)		0.5318 (0.1017)
λ_4 , libertarian	0.1703 (0.0641)	0.2001 (0.0707)	0.1681 (0.0641)	0.2792 (0.0813)	
ζ	5.235 (0.487)	4.794 (0.447)	5.167 (0.475)	4.474 (0.549)	4.611 (0.455)
σ	3.710 (0.728)	3.017 (0.524)	3.703 (0.690)	3.468 (0.702)	3.129 (0.576)
γ	23.68 (4.10)	21.56 (3.35)	22.48 (3.54)	16.48 (2.44)	19.86 (3.09)
Log likelihood	-346.07	-357.22	-347.25	-369.92	-358.33

Table 6: Estimates of structural model. Standard errors, calculated using the outer product of the gradient (Berndt et al., 1974) in parentheses.